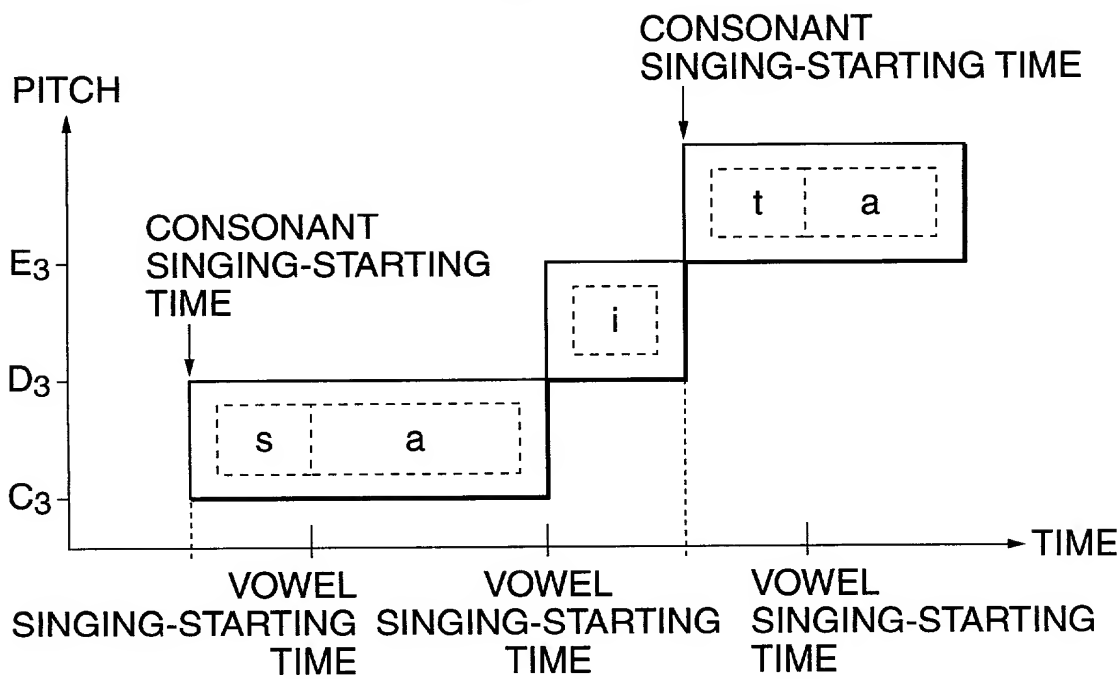
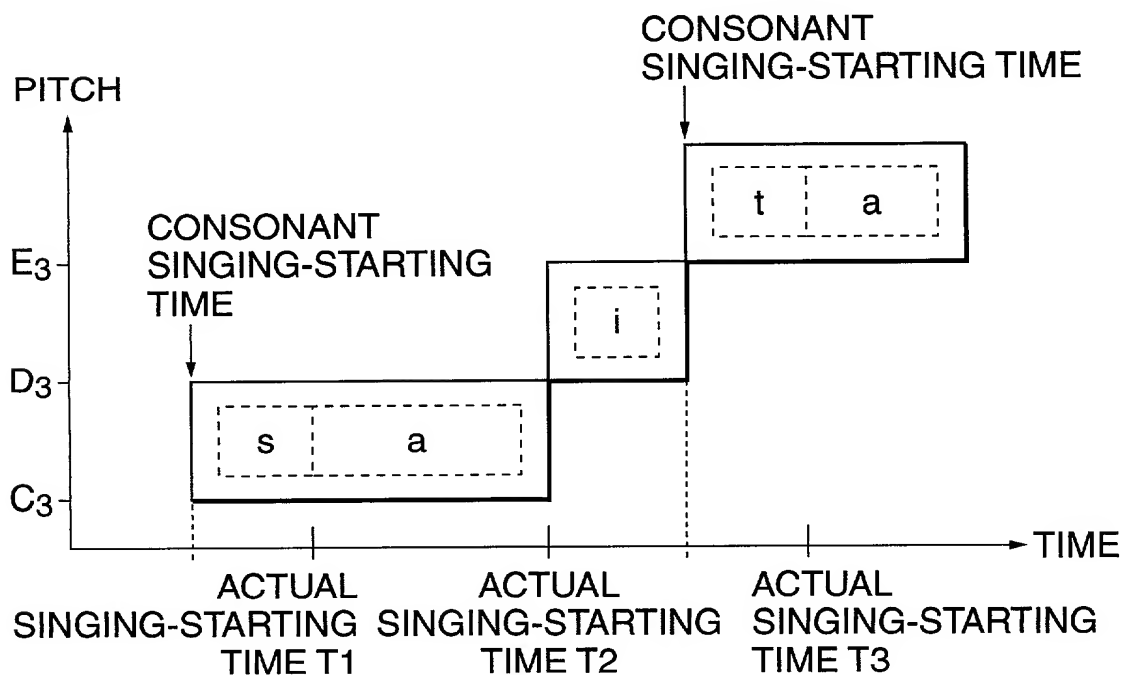


1/38

**FIG. 1A**



**FIG. 1B**



2/38

FIG. 2

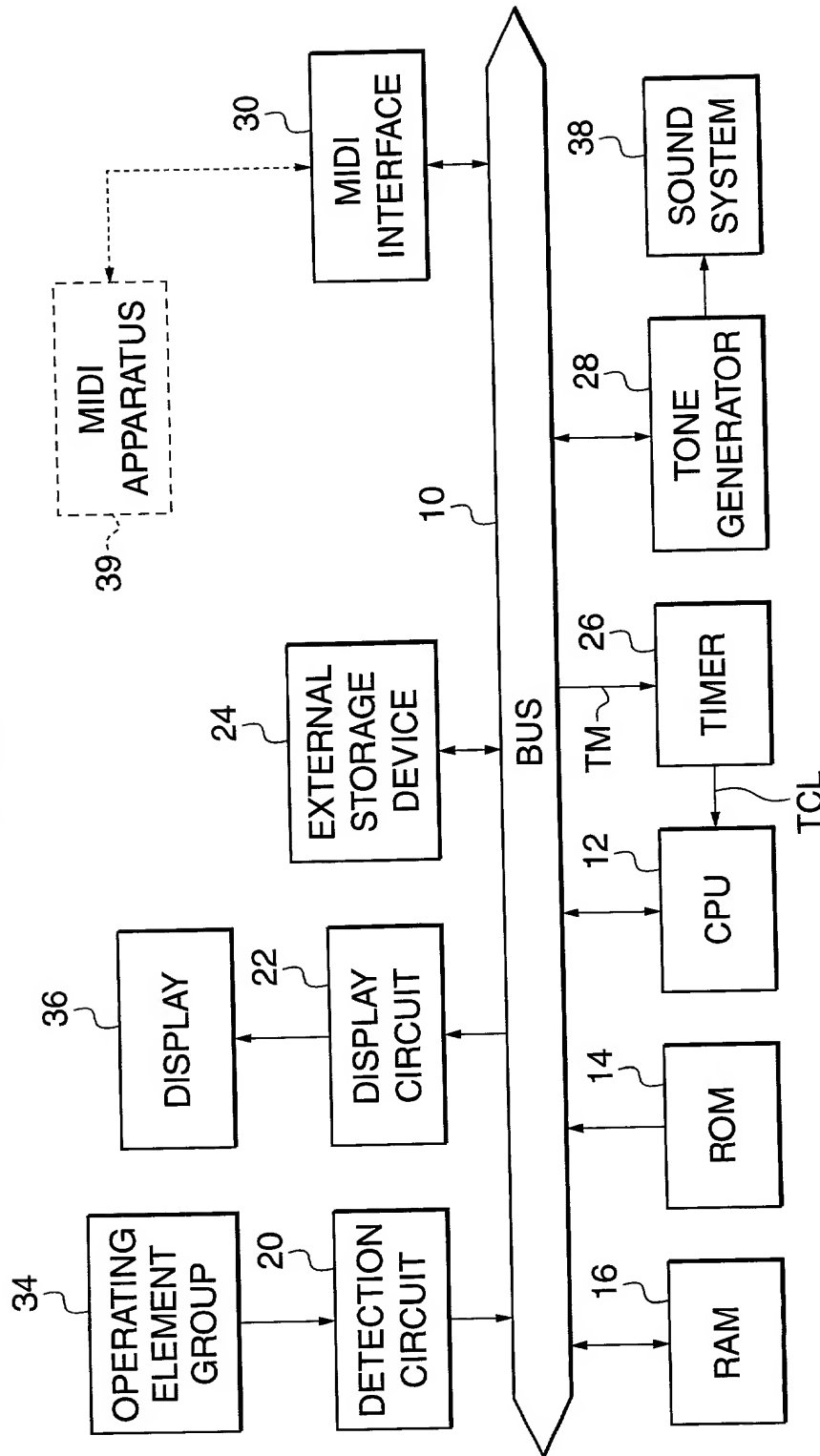


FIG. 3

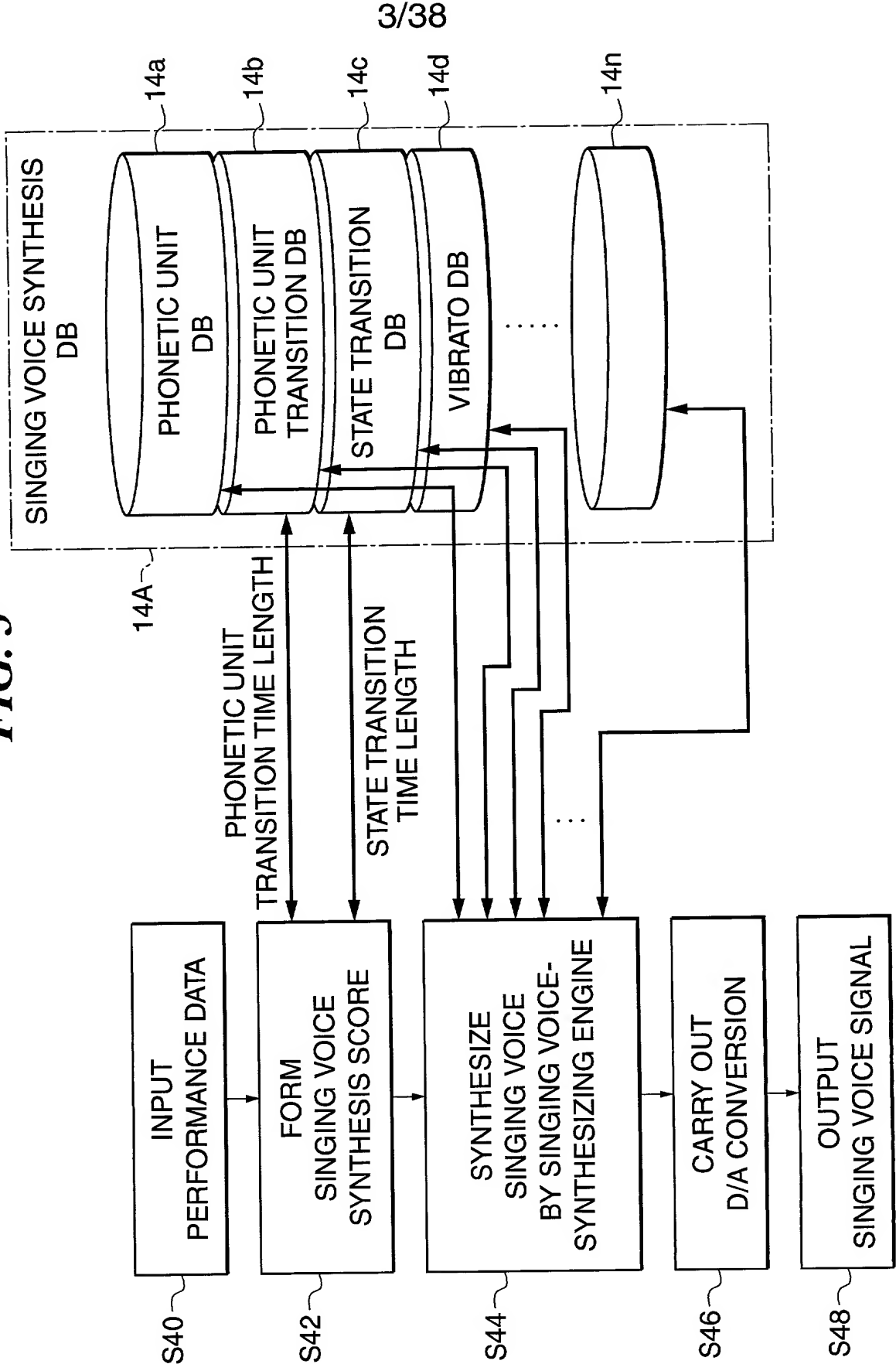


FIG. 4

PERFORMANCE INFORMATION	INFORMATION	EXPLANATION
NOTE INFORMATION	Note On	ACTUAL SINGING-STARTING TIME
	Duration	ACTUAL SINGING LENGTH
	Pitch	SINGING VOICE PITCH
PHONETIC UNIT TRACK INFORMATION	PhU	SINGING PHONETIC UNIT
	Consonant Modification	SINGING CONSONANT EXPANSION/COMPRESSION RATIO
	Attack Type	SINGING ATTACK TYPE
TRANSITION TRACK INFORMATION	Attack Rate	SINGING ATTACK EXPANSION/COMPRESSION RATIO
	Release Type	SINGING RELEASE TYPE
	Release Rate	SINGING RELEASE EXPANSION/COMPRESSION RATIO
	Note Transition Type	SINGING NOTE TRANSITION TYPE
	Note Transition Rate	SINGING NOTE TRANSITION EXPANSION/COMPRESSION RATIO
VIBRATO TRACK INFORMATION	Vibrato Number	NUMBER OF VIBRATO EVENTS IN PERFORMANCE DATA
	Vibrato Delay 1	FIRST VIBRATO DELAY TIME
	Vibrato Duration 1	FIRST VIBRATO DURATION TIME
	Vibrato Type 1	FIRST VIBRATO TYPE
	: : :	: : :
	Vibrato Delay K	K-TH VIBRATO DELAY TIME
	Vibrato Duration K	K-TH VIBRATO DURATION TIME
	Vibrato Type K	K-TH VIBRATO TYPE

FIG. 5

VIBRATO TYPE	PITCH	
a	P1	TONE GENERATOR CONTROL INFORMATION
	P2	TONE GENERATOR CONTROL INFORMATION
	⋮	⋮
i	P1	
	⋮	
M	⋮	
⋮	⋮	
Sil	⋮	

FIG. 6A

PHONETIC UNIT TRANSITION TIME LENGTH
(a) V_Sil TRANSITION TIME LENGTH
(b) Sil_C TRANSITION TIME LENGTH
(c) C_V TRANSITION TIME LENGTH
(d) Sil_V TRANSITION TIME LENGTH
(e) pV_C TRANSITION TIME LENGTH
(f) pV_V TRANSITION TIME LENGTH

FIG. 6B

PRECEDING PHONETIC UNIT	FOLLOWING PHONETIC UNIT	PITCH		
a	i	P1	PHONETIC UNIT TRANSITION TIME LENGTH	TONE GENERATOR CONTROL INFORMATION
		P2	PHONETIC UNIT TRANSITION TIME LENGTH	TONE GENERATOR CONTROL INFORMATION
		⋮	⋮	⋮
	M	P1		
		⋮		
	⋮	⋮		
	Aspiration	⋮		
	Sil	⋮		
i	a	⋮		
	M	⋮		
	⋮	⋮		
	Aspiration	⋮		
	Sil	⋮		
M	a	⋮		
	i	⋮		
	⋮	⋮		
	Aspiration	⋮		
	Sil	⋮		
⋮	⋮	⋮		
Sil	a	⋮		
	i	⋮		
	M	⋮		
	⋮	⋮		
	Aspiration	⋮		

FIG. 7

TRANSITION STATE	TRANSITION TYPE	PHONETIC UNIT	PITCH		
Attack	Normal	a	P1	STATE TRANSITION TIME LENGTH	TONE GENERATOR CONTROL INFORMATION
			P2	STATE TRANSITION TIME LENGTH	TONE GENERATOR CONTROL INFORMATION
			⋮	⋮	⋮
		i	P1		
			⋮		
		M	⋮		
		⋮	⋮		
	Sexy	a	⋮		
		i	⋮		
		M	⋮		
		⋮	⋮		
	Sharp	a	⋮		
		i	⋮		
		M	⋮		
		⋮	⋮		
	Soft	a	⋮		
		i	⋮		
		M	⋮		
		⋮	⋮		
	⋮	⋮	⋮		
NtN	Normal	a	⋮		
		⋮	⋮		
		⋮	⋮		
Release	Normal	a	⋮		
		⋮	⋮		
		⋮	⋮		



FIG. 8

VIBRATO TYPE	PHONETIC UNIT	PITCH	
Normal	a	P1	TONE GENERATOR CONTROL INFORMATION
		P2	TONE GENERATOR CONTROL INFORMATION
		⋮	⋮
	i	P1	
		⋮	
	M	⋮	
	⋮	⋮	
Sexy	a	⋮	
	i	⋮	
	M	⋮	
	⋮	⋮	
⋮	⋮	⋮	
Enka	a	⋮	
	i	⋮	
	M	⋮	
	⋮	⋮	

FIG. 9

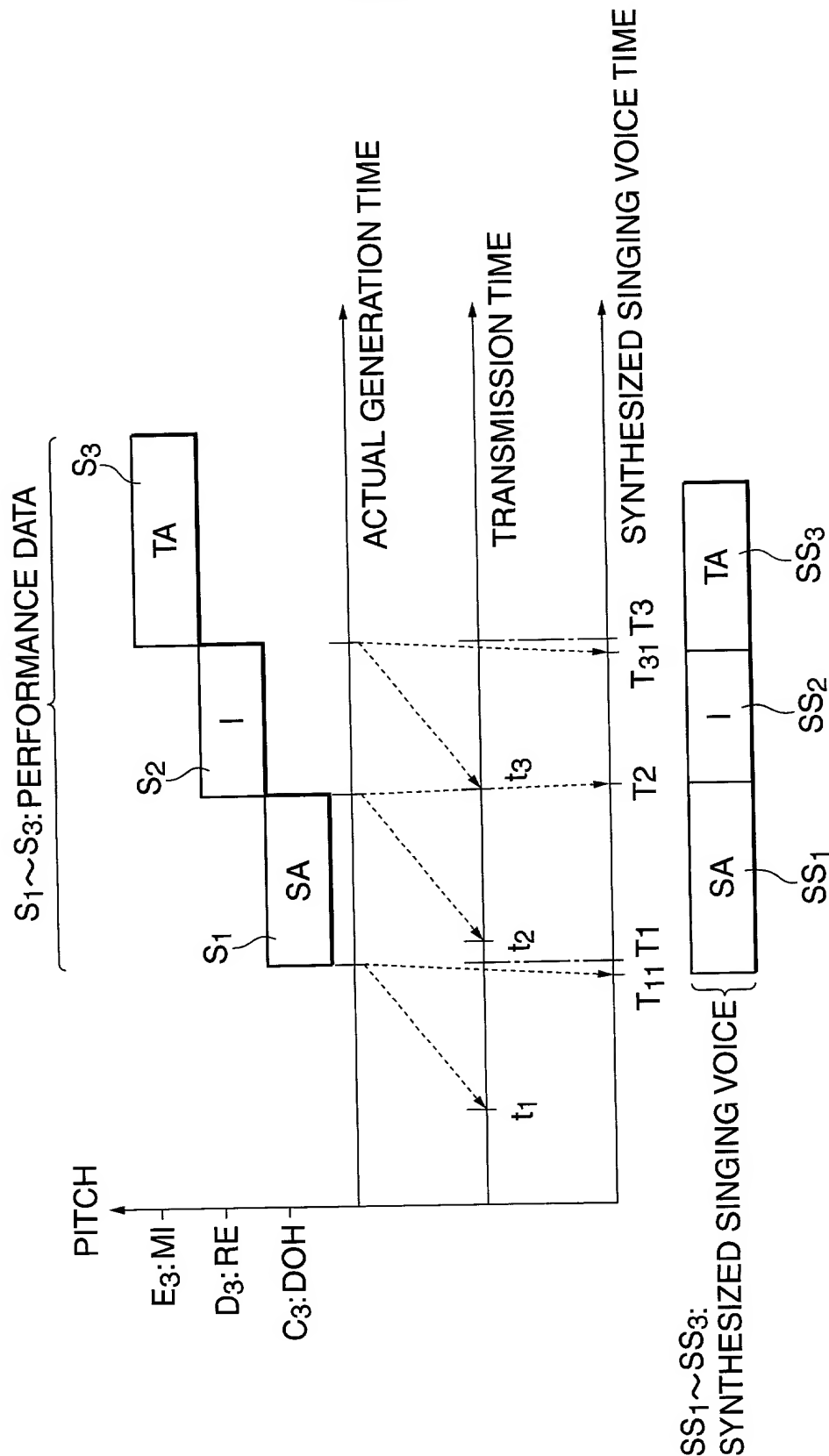


FIG. 10

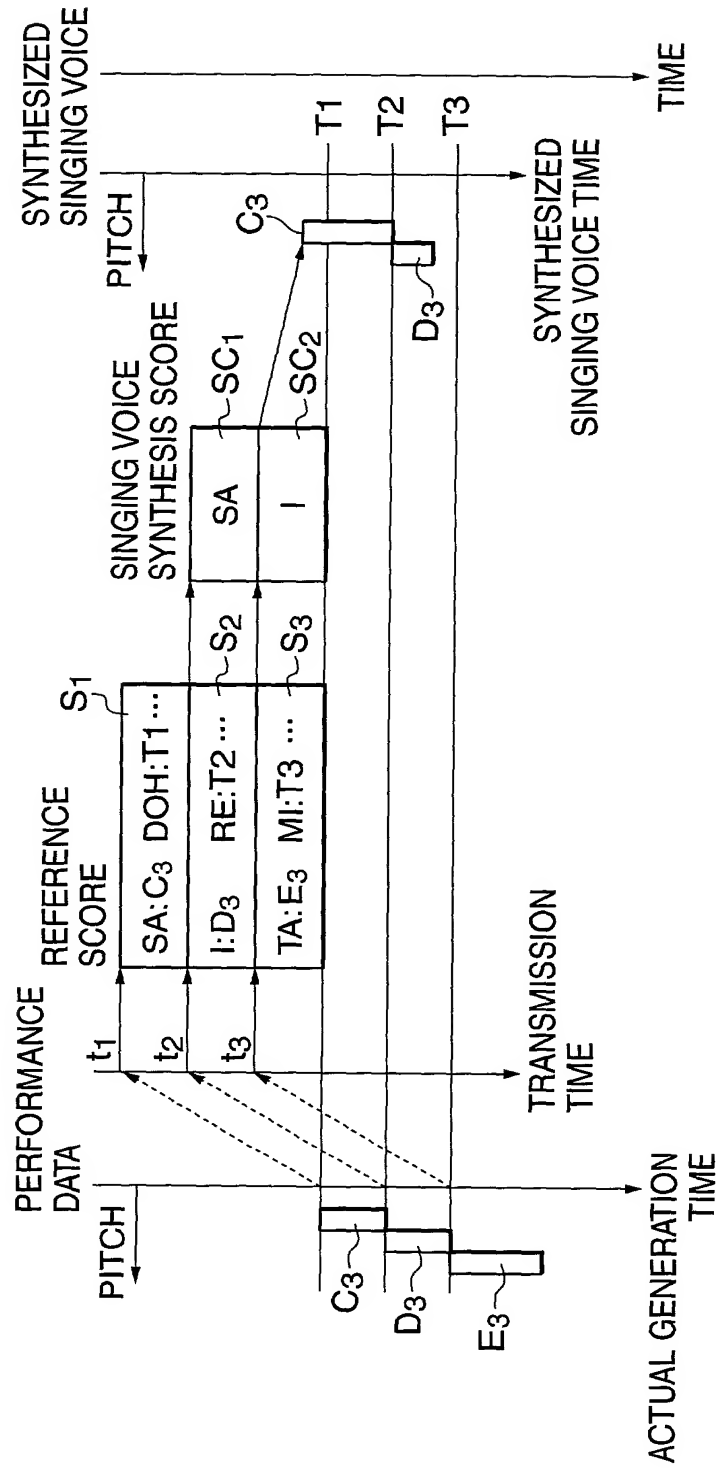


FIG. 11

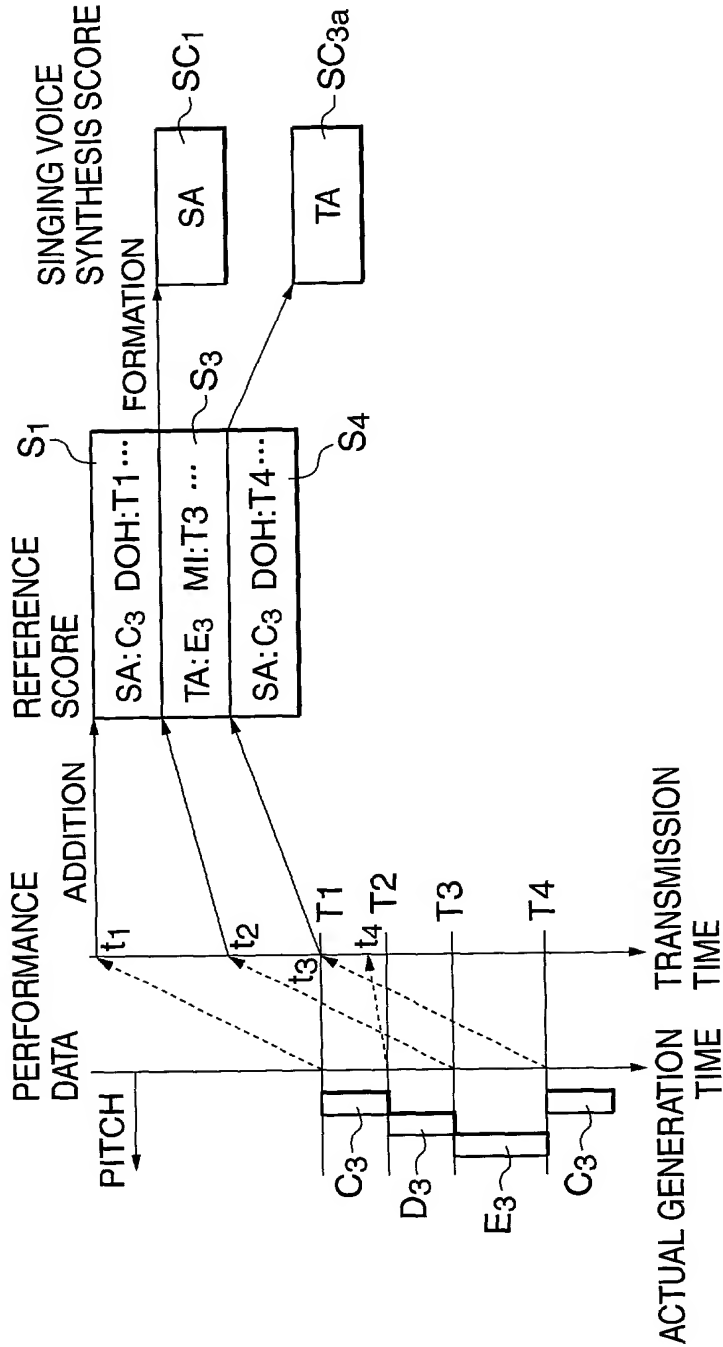


FIG. 12

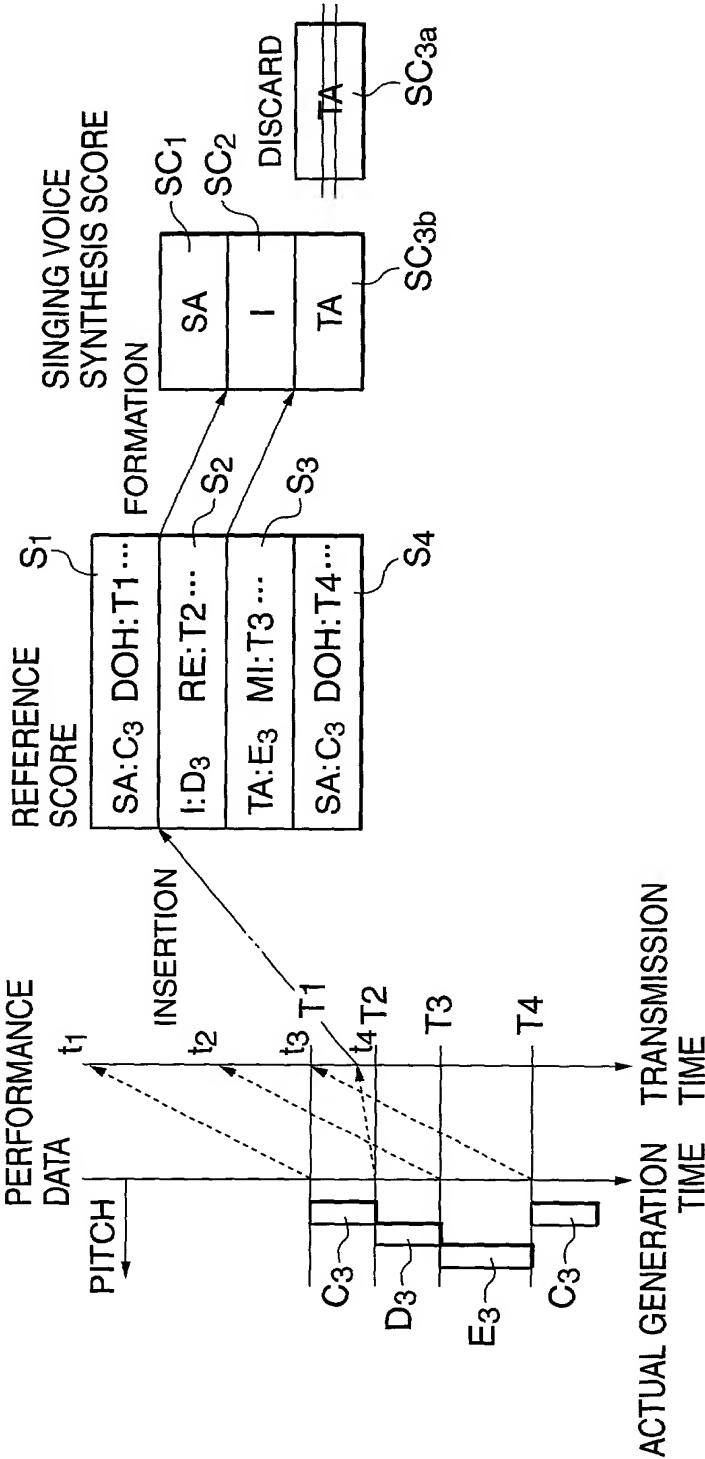


FIG. 13

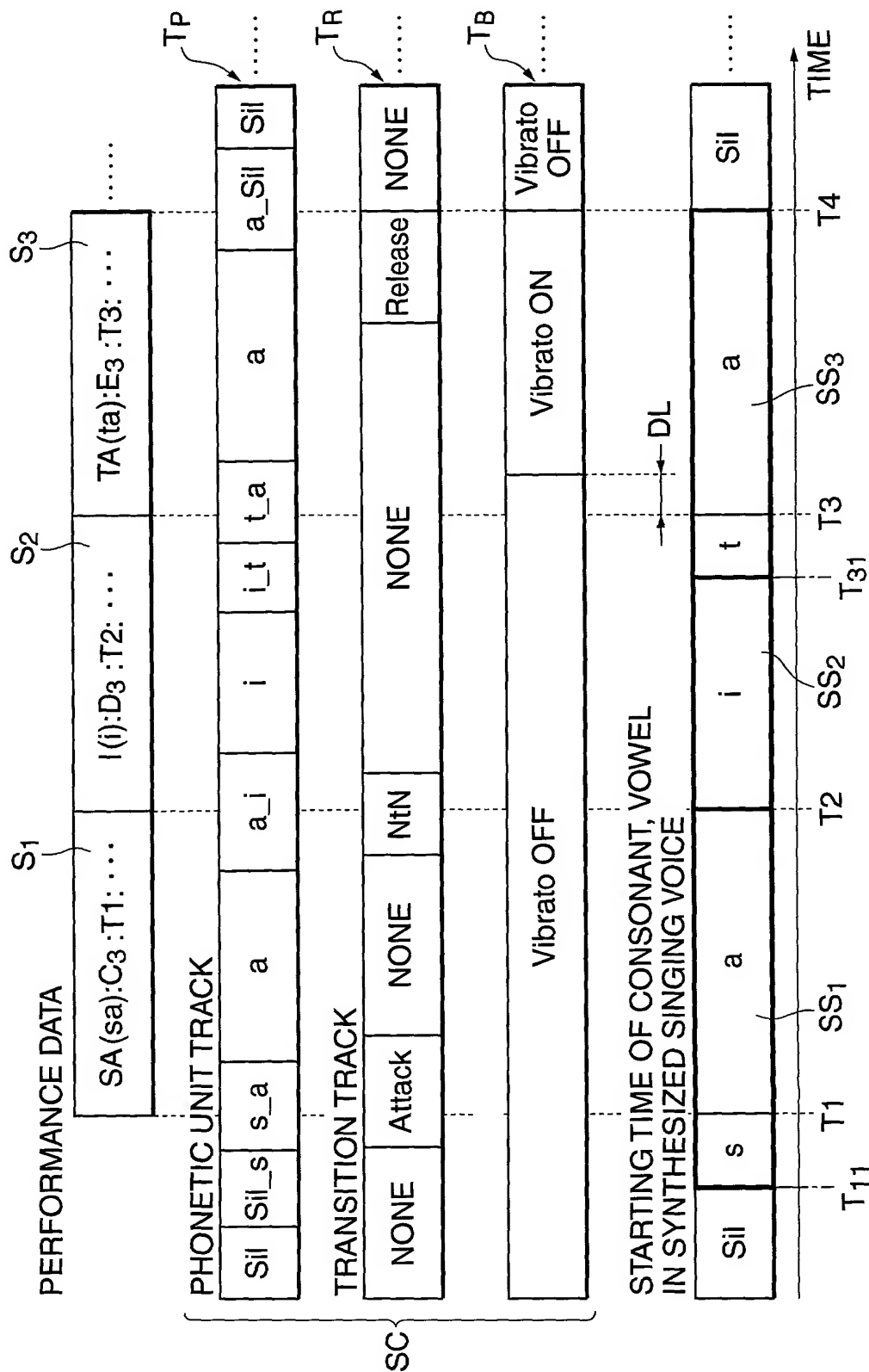


FIG. 14

ITEMS OF PHONETIC UNIT TRACK T <sub>p</sub>	INFORMATION	CONTENTS	EXPLANATION
Sil	Begin Time	T11	STARTING TIME
	Duration	D11	DURATION TIME
	PhU	Sil	PHONETIC UNIT
Sil_s	Begin Time	T12	STARTING TIME
	Duration	D12	DURATION TIME
	PhU1, PhU2	Sil, s	PHONETIC UNIT
s_a	Begin Time	T13	STARTING TIME
	Duration	D13	DURATION TIME
	PhU1, PhU2	s, a	PHONETIC UNIT
a	Begin Time	T14	STARTING TIME
	Duration	D14	DURATION TIME
	PhU	a	PHONETIC UNIT

FIG. 15

ITEMS OF TRANSITION TRACK Tr	INFORMATION	CONTENTS	EXPLANATION
NONE	Begin Time	T21	STARTING TIME
	Duration	D21	DURATION TIME
	Index	NONE	TRANSITION INDEX
Attack	Begin Time	T22	STARTING TIME
	Duration	D22	DURATION TIME
	Index	Attack	TRANSITION INDEX
NONE	Type	Type22	TYPE OF TRANSITION INDEX
	Begin Time	T23	STARTING TIME
	Duration	D23	DURATION TIME
NONE	Index	NONE	TRANSITION INDEX
	Begin Time	T24	STARTING TIME
	Duration	D24	DURATION TIME
NtN	Index	NtN	TRANSITION INDEX
	Type	Type24	TYPE OF TRANSITION INDEX
	Begin Time	T25	STARTING TIME
NONE	Duration	D25	DURATION TIME
	Index	NONE	TRANSITION INDEX
	Begin Time	T26	STARTING TIME
Release	Duration	D26	DURATION TIME
	Index	Release	TRANSITION INDEX
	Type	Type26	TYPE OF TRANSITION INDEX

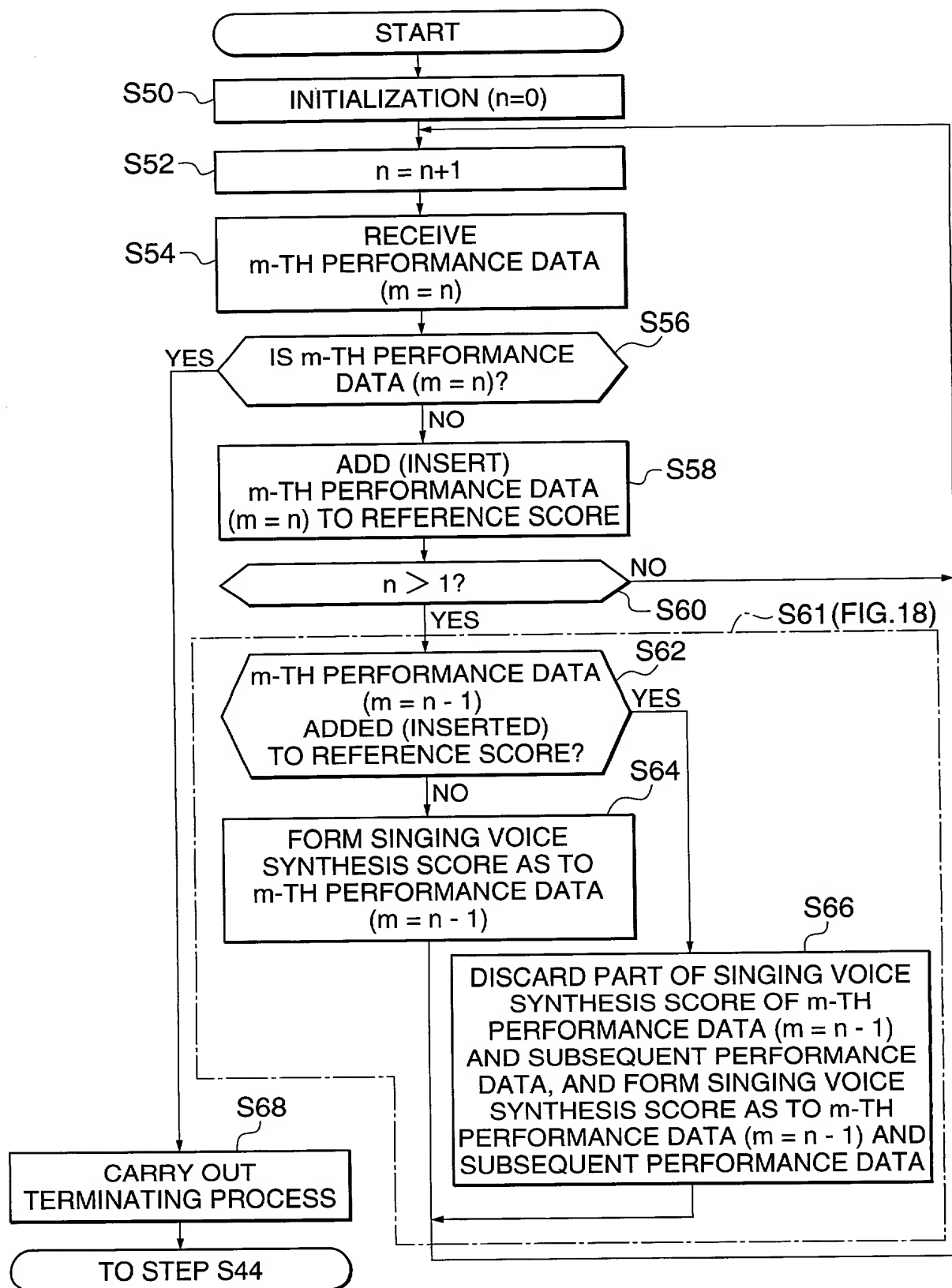


FIG. 16

ITEMS OF VIBRATO TRACK TB	INFORMATION	CONTENTS	EXPLANATION
Vibrato OFF	Begin Time	T31	STARTING TIME
	Duration	D31	DURATION TIME
	Index	OFF	INDEX
Vibrato ON	Begin Time	T32	STARTING TIME
	Duration	D32	DURATION TIME
	Index	ON	INDEX
Vibrato OFF	Type	Type32	TYPE OF VIBRATO
	Begin Time	T33	STARTING TIME
	Duration	D33	DURATION TIME
	Index	OFF	INDEX

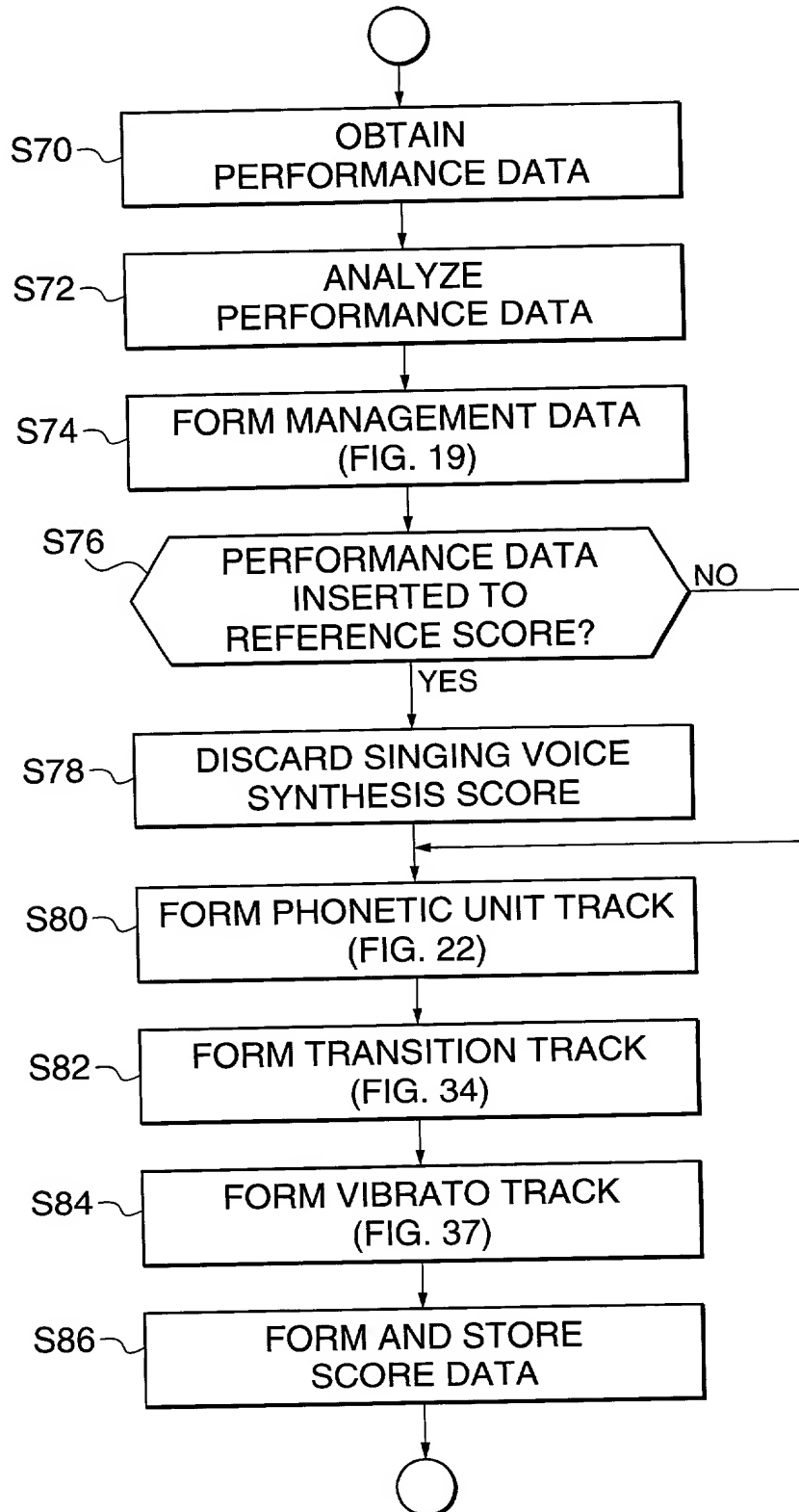
18/38

**FIG. 17**



19/38

**FIG. 18**



20/38

**FIG. 19**

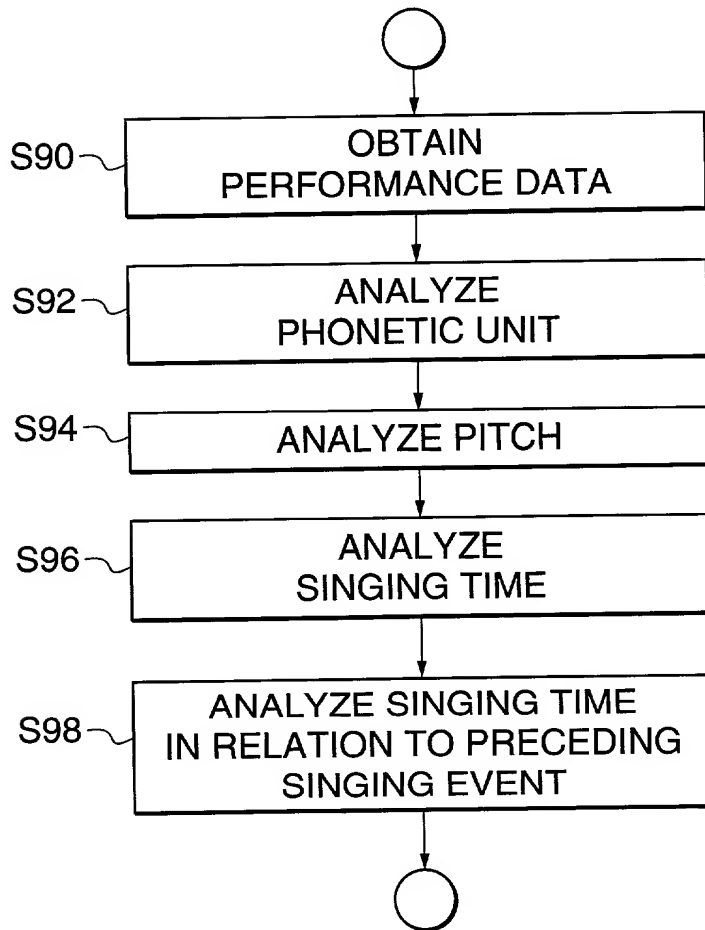


FIG. 20

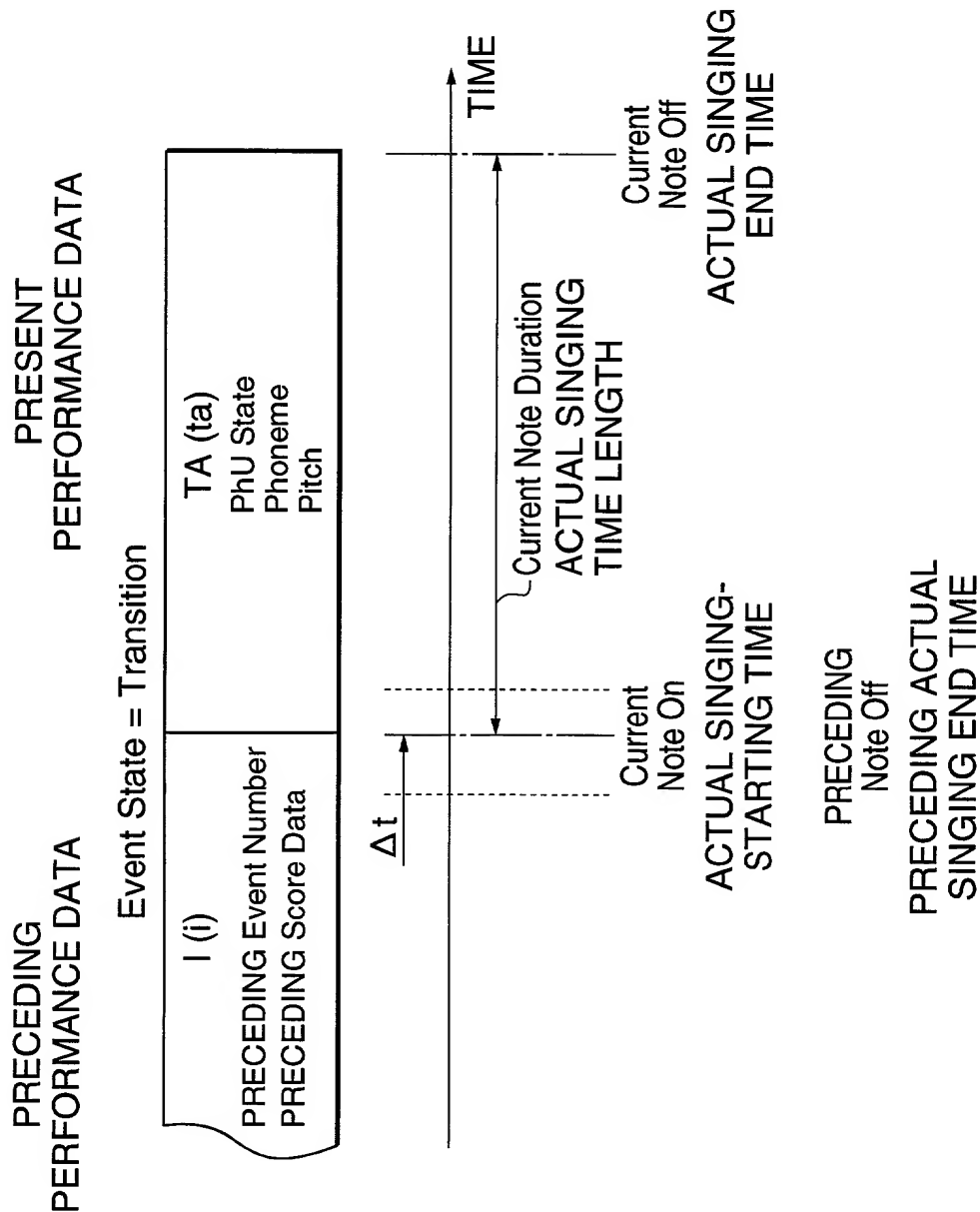
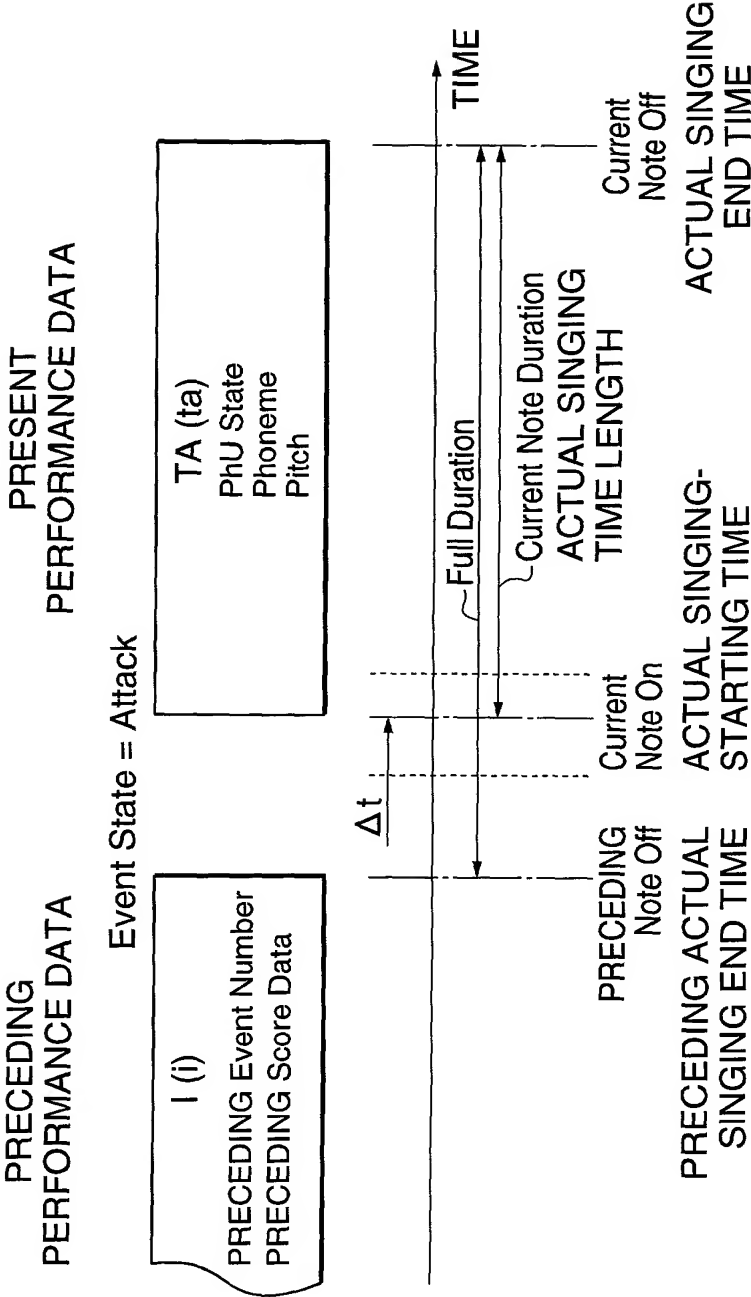


FIG. 21



**FIG. 22**

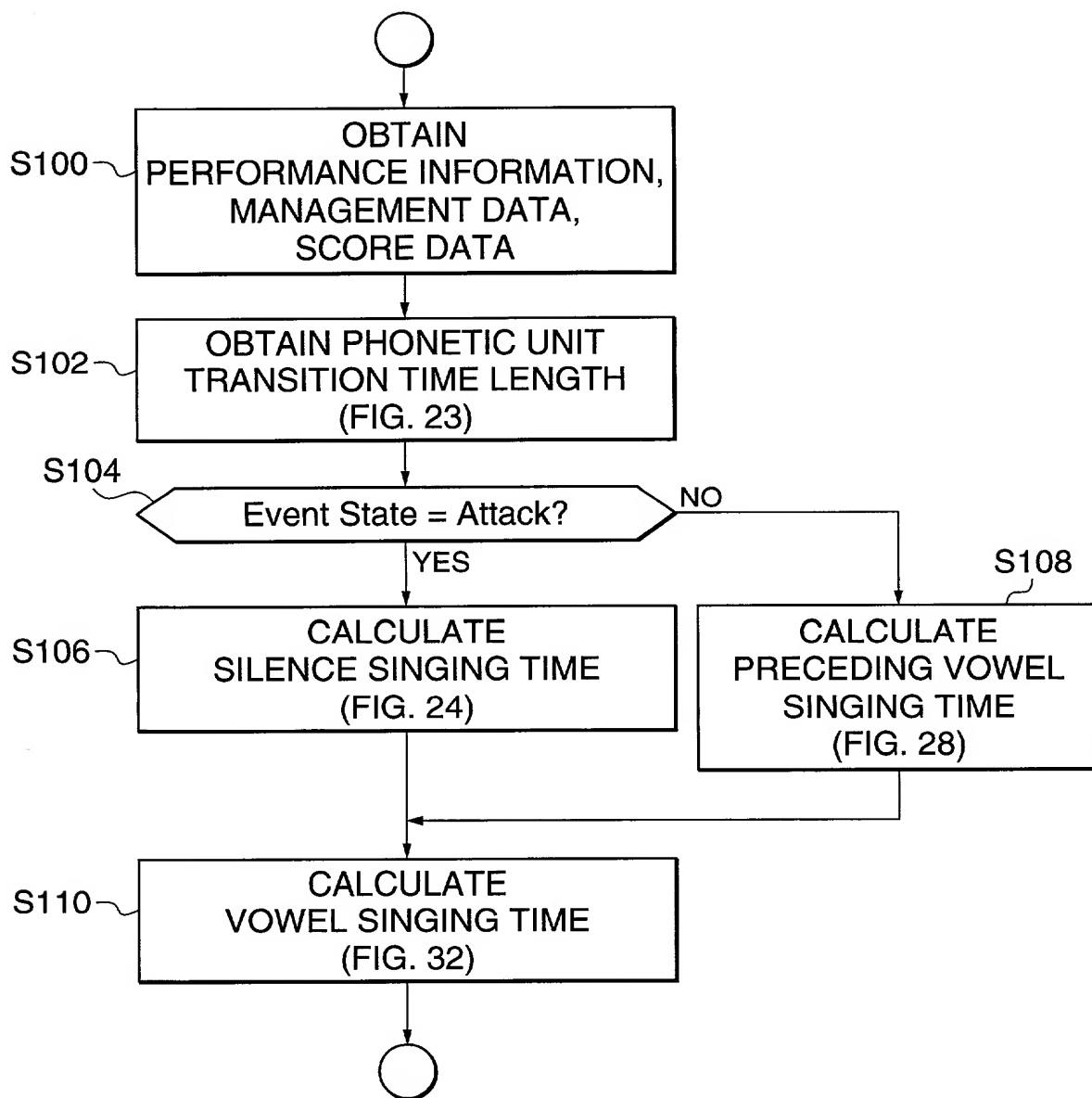
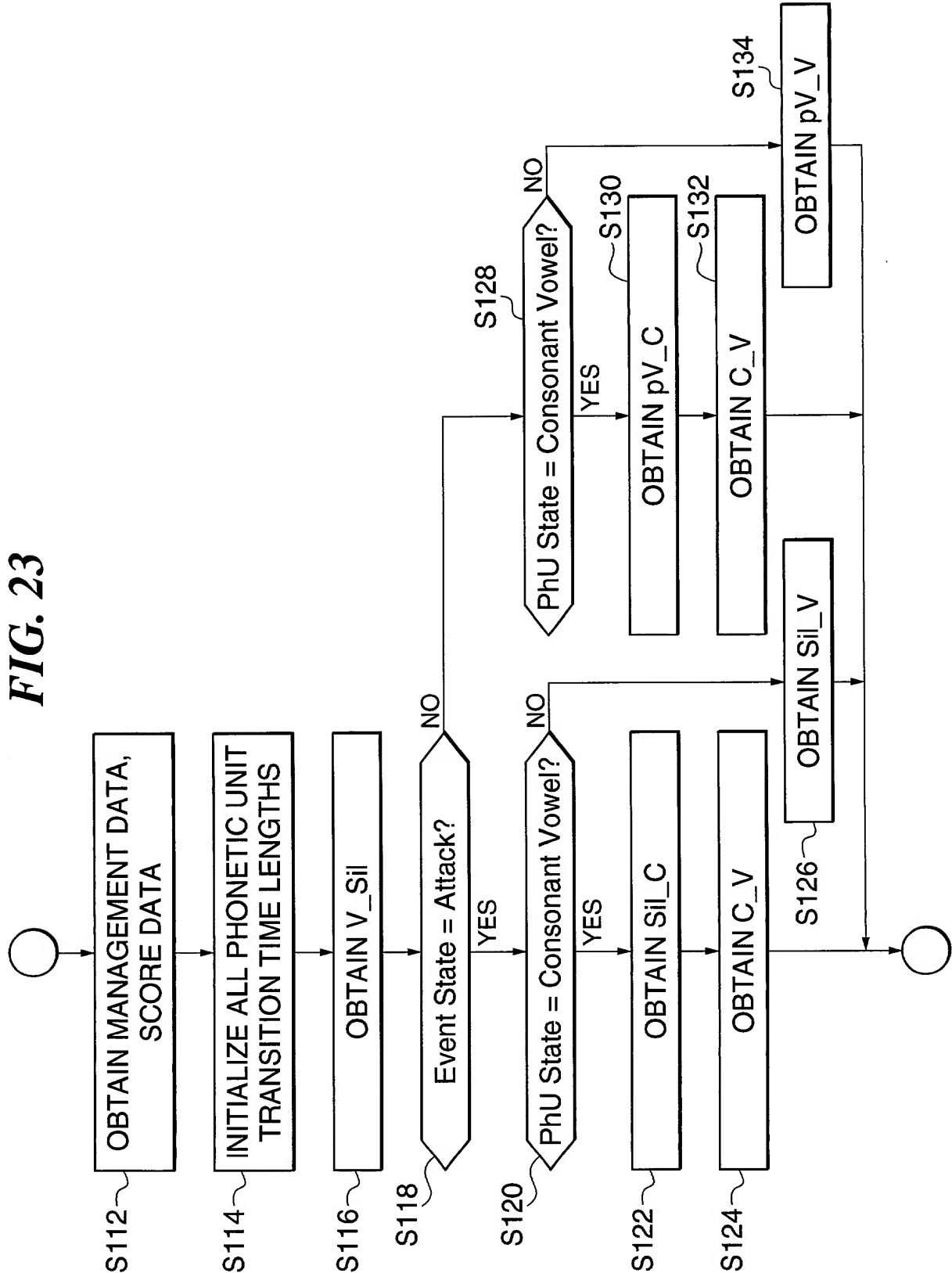


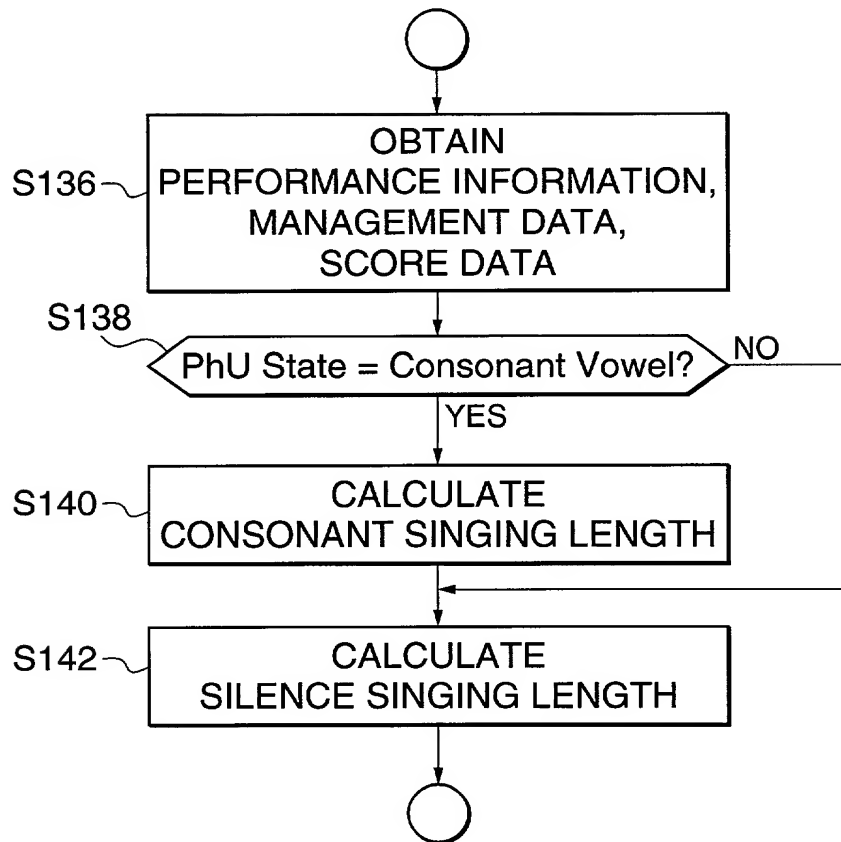
FIG. 23





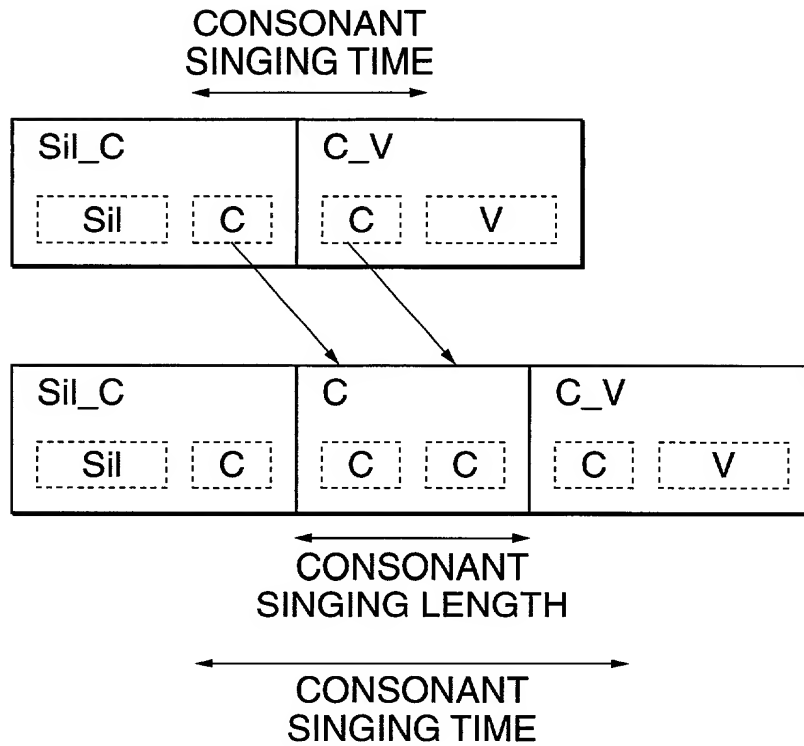
25/38

**FIG. 24**



26/38

**FIG. 25**



**FIG. 26**

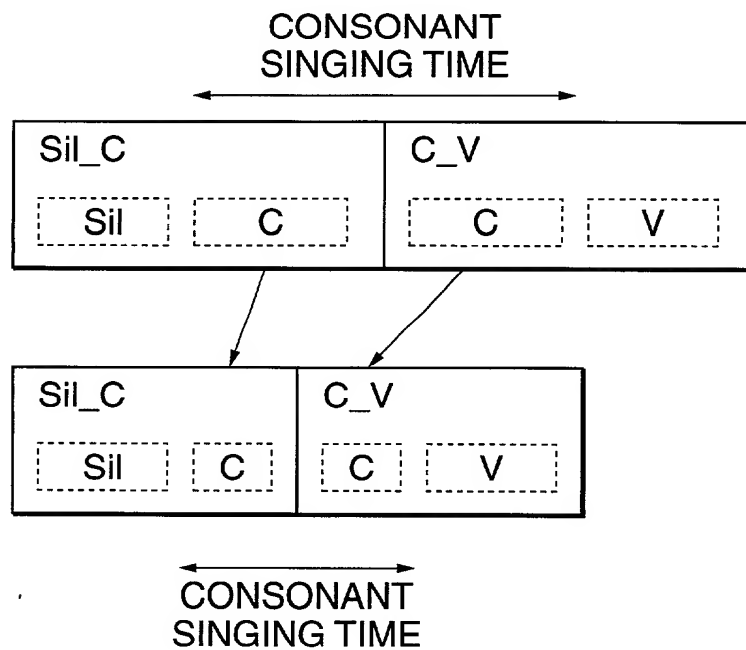


FIG. 27A

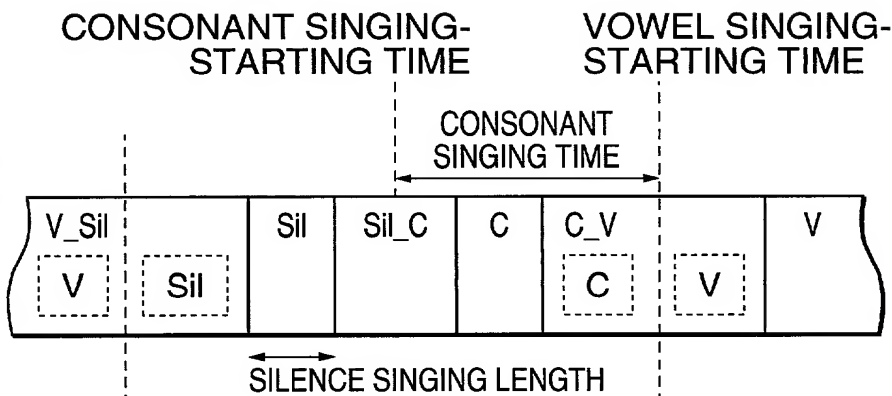


FIG. 27B

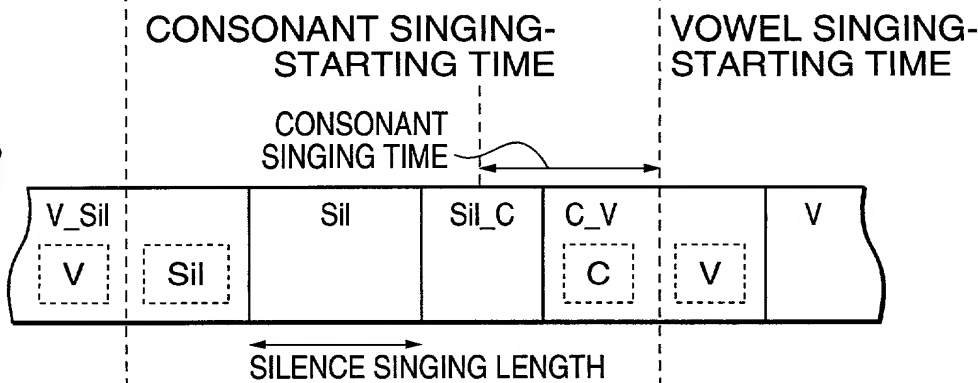
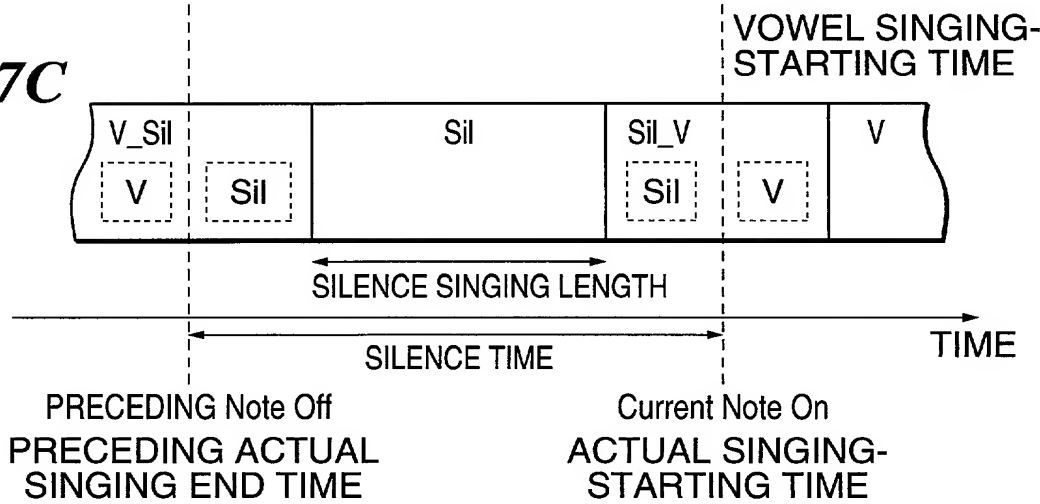
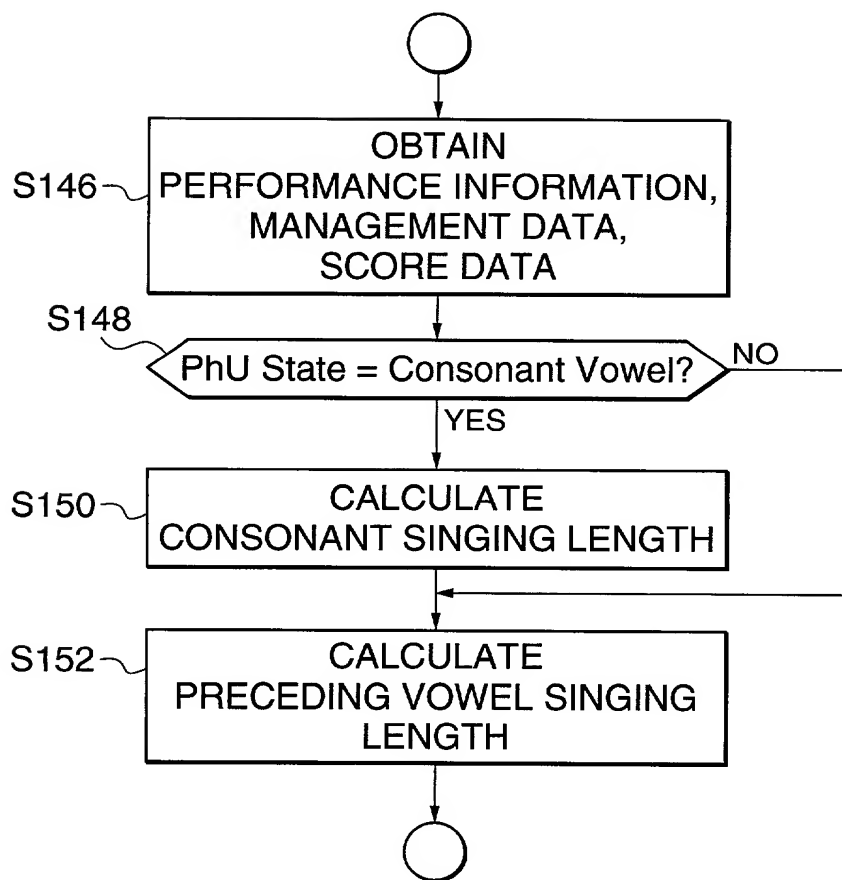


FIG. 27C

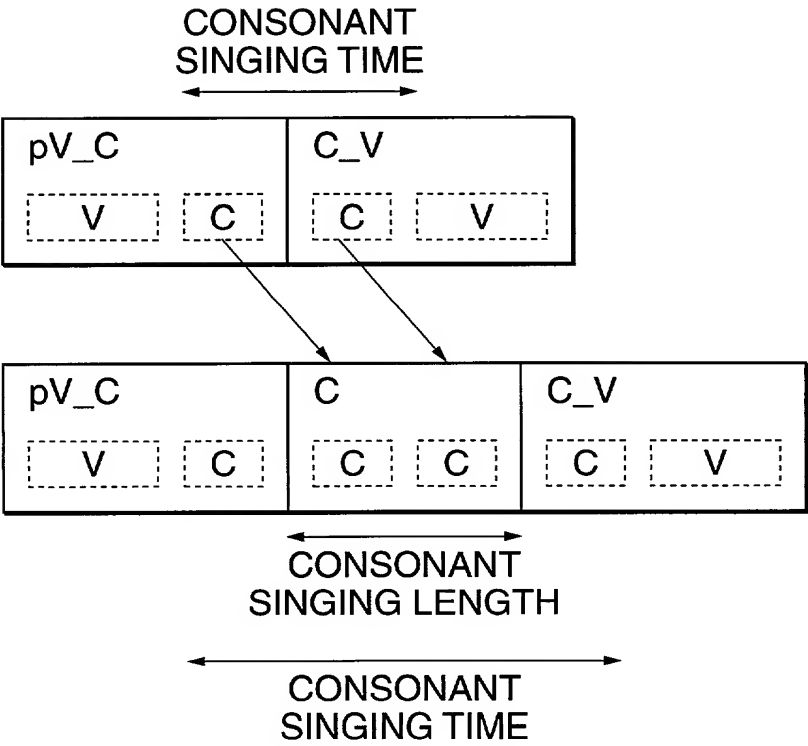


28/38

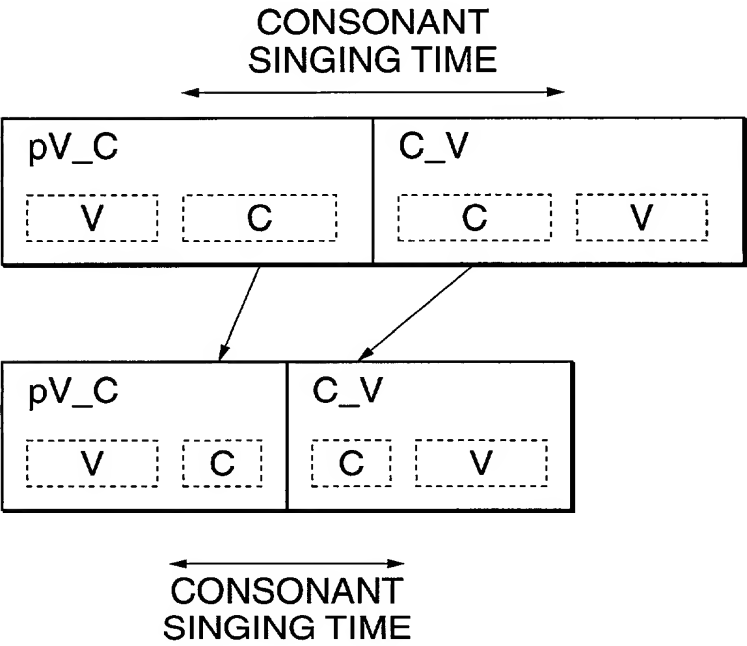
**FIG. 28**



**FIG. 29**

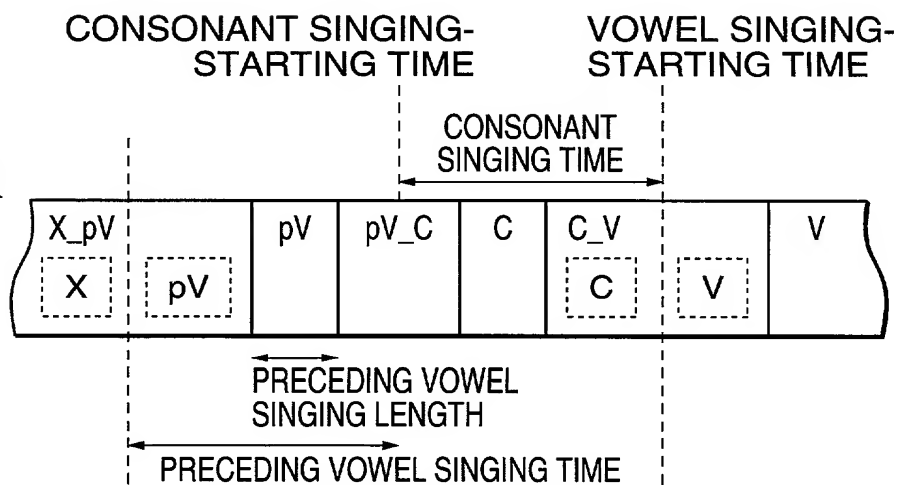


**FIG. 30**

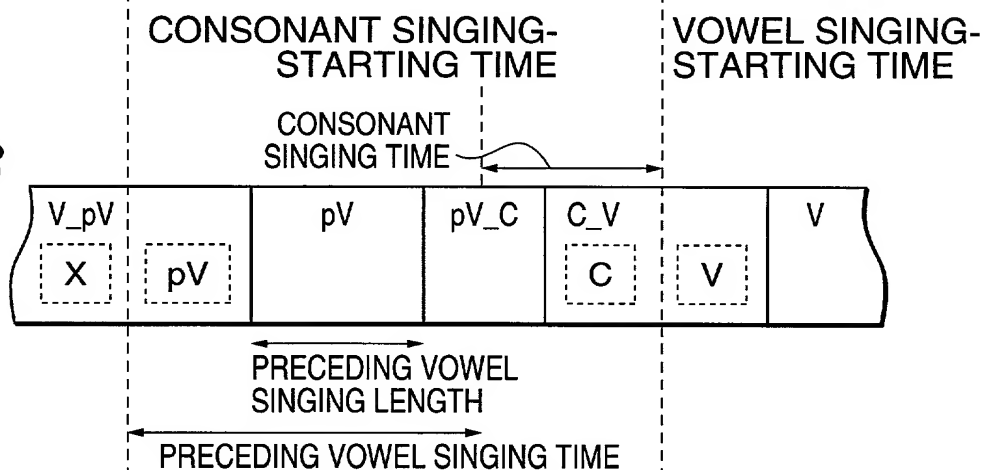


30/38

**FIG. 31A**



**FIG. 31B**



**FIG. 31C**

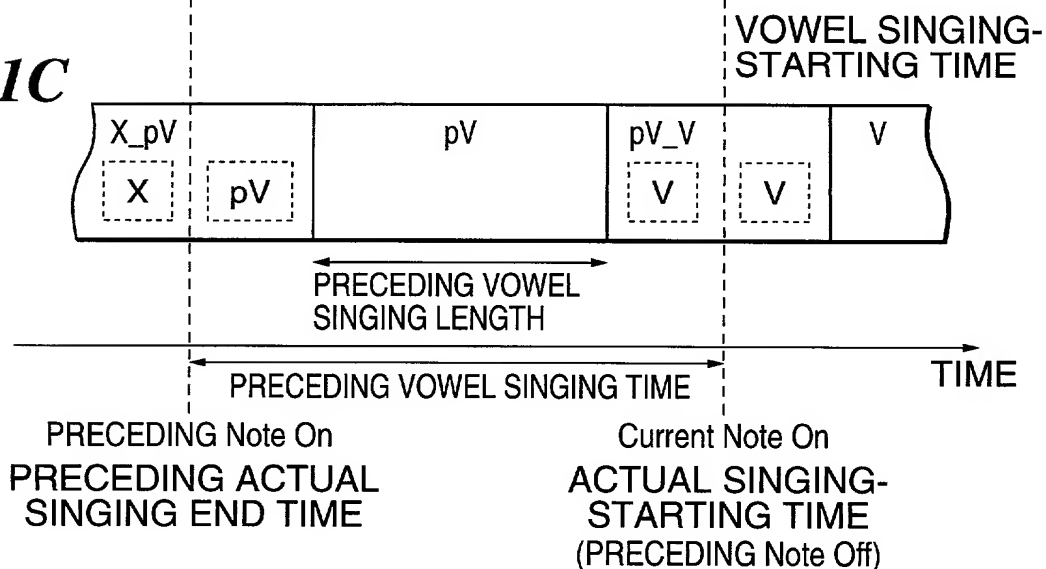


FIG. 32

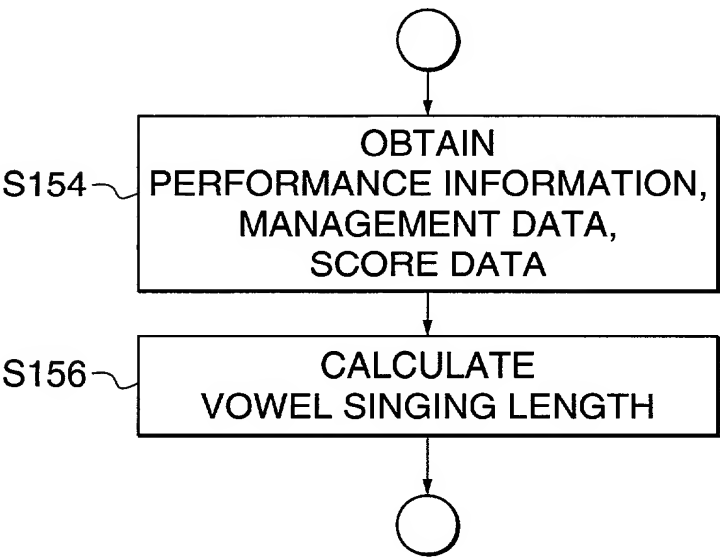
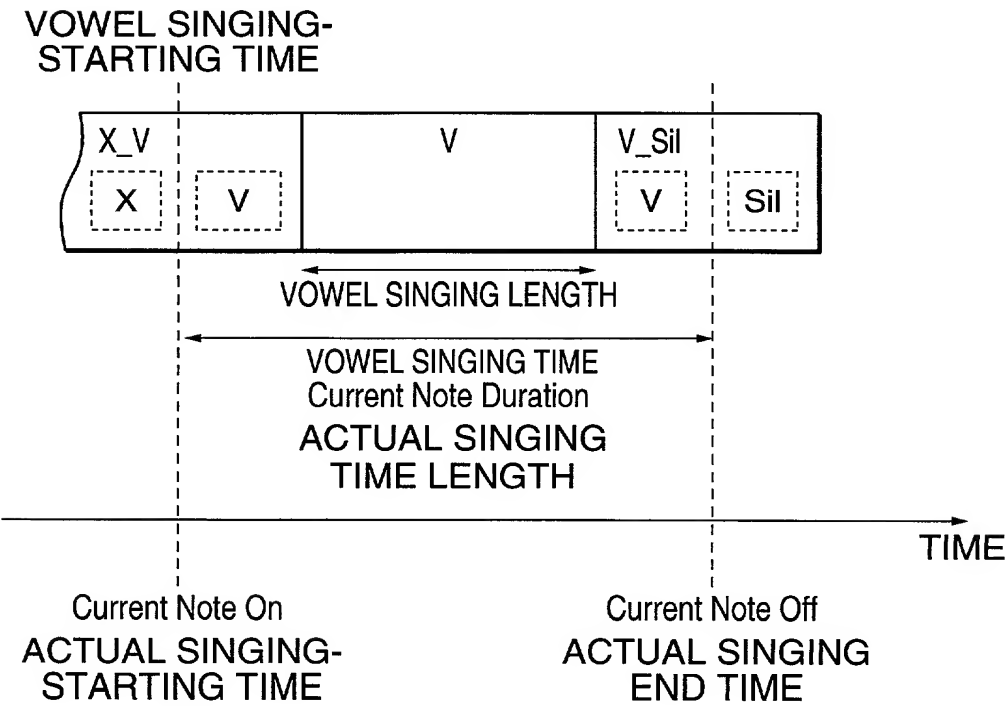


FIG. 33



**FIG. 34**

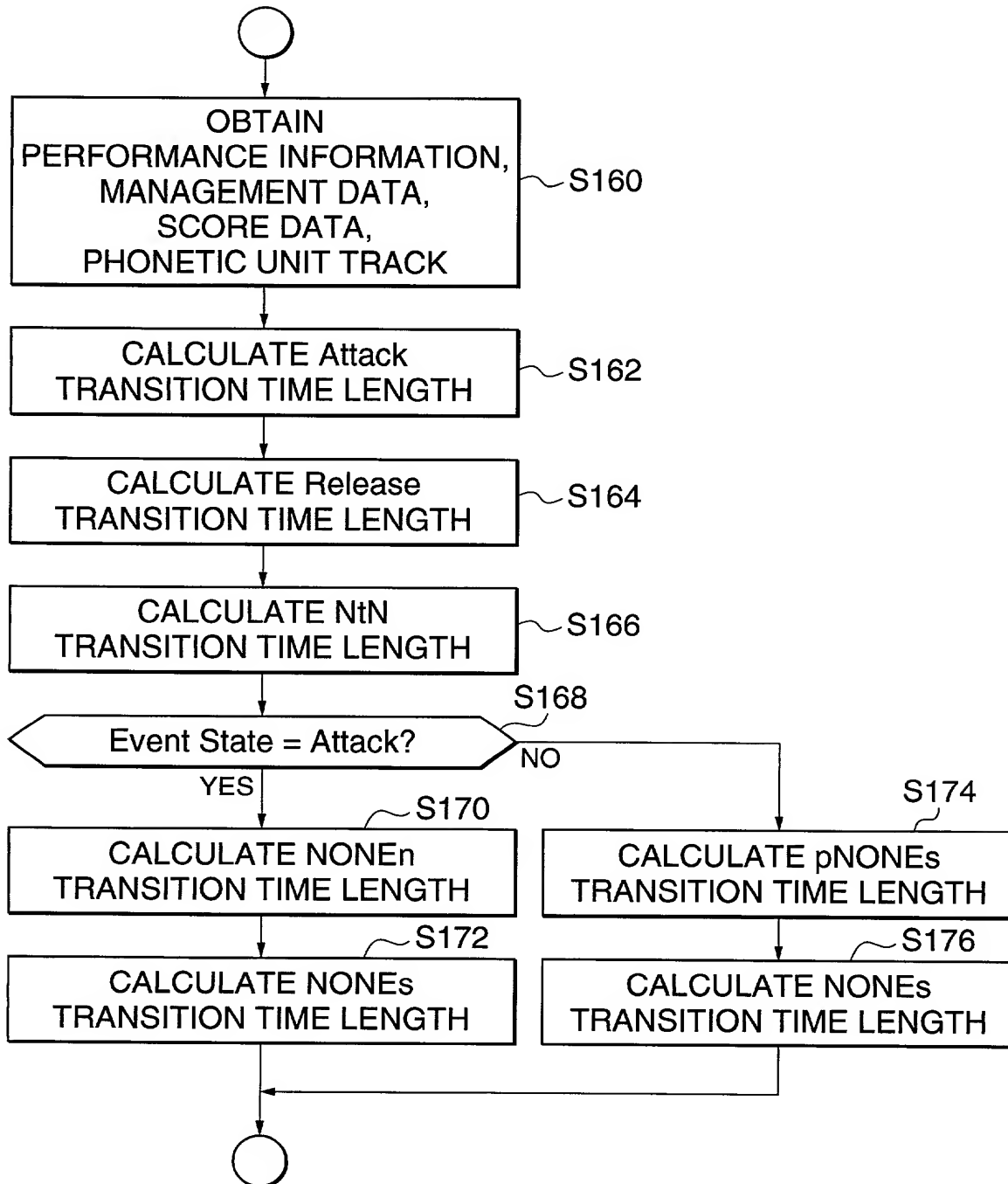




FIG. 35A

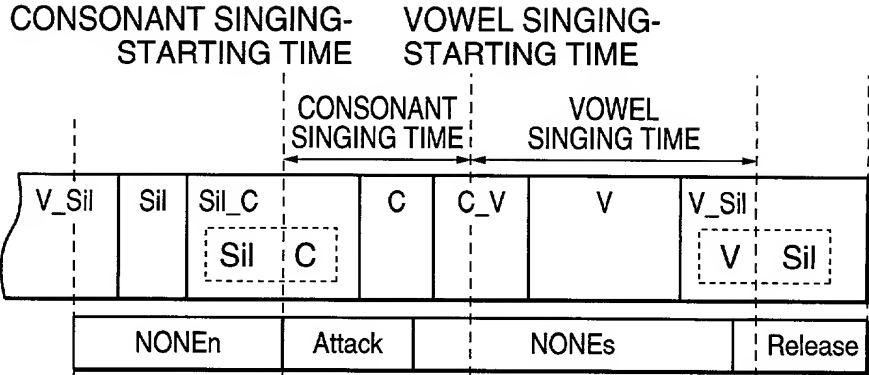


FIG. 35B

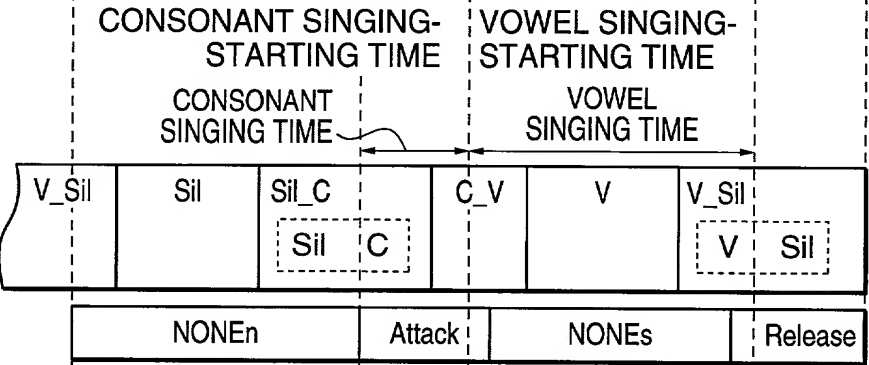
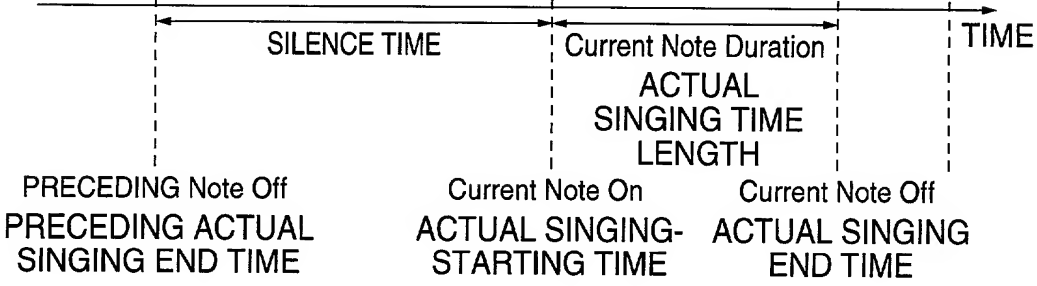
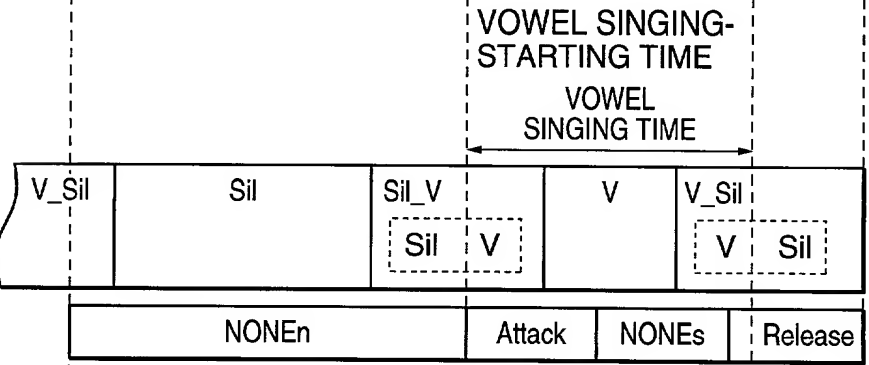
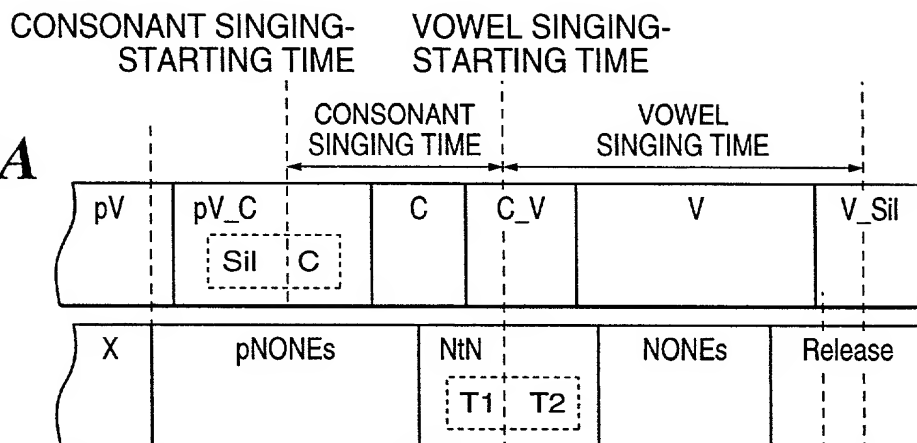


FIG. 35C

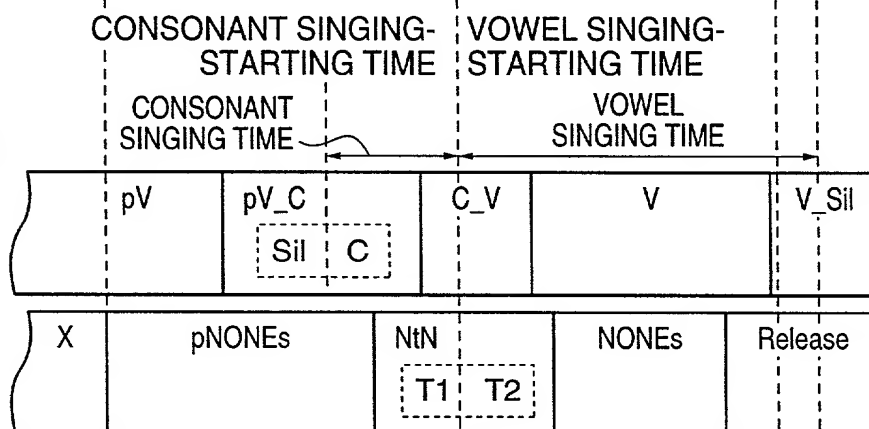


34/38

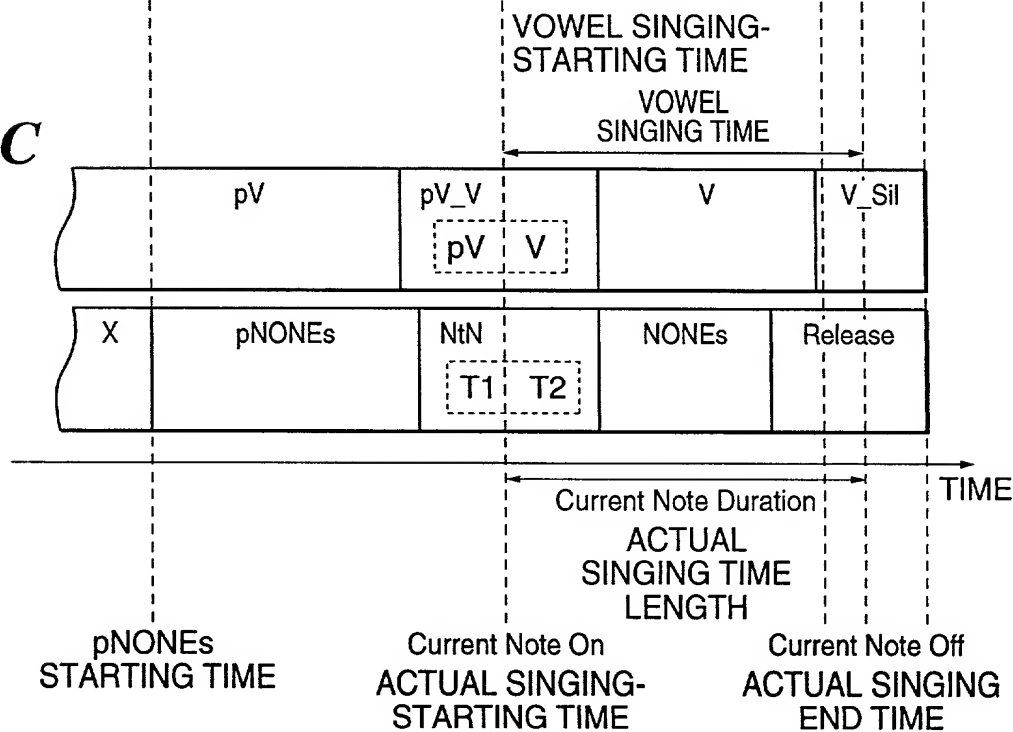
**FIG. 36A**



**FIG. 36B**

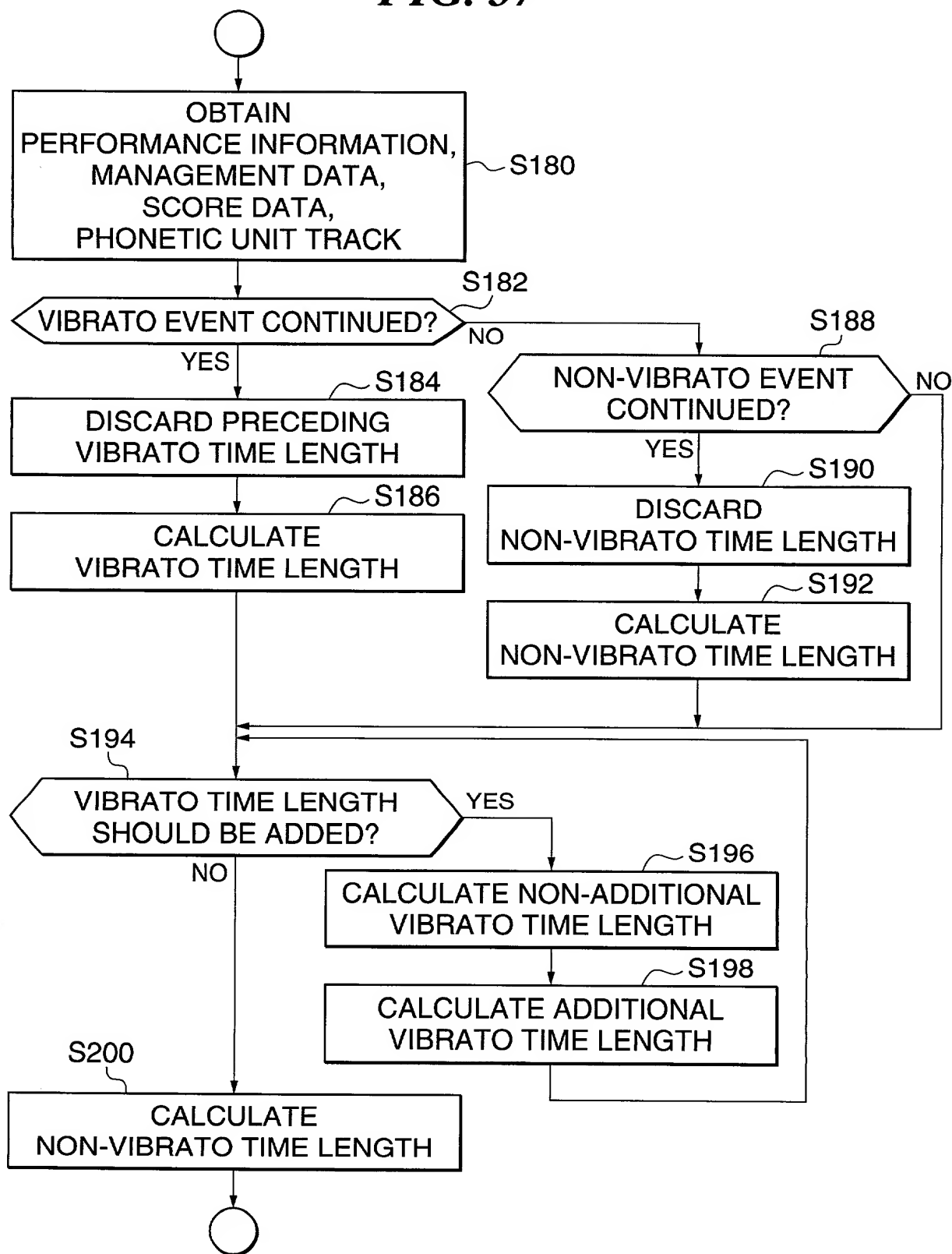


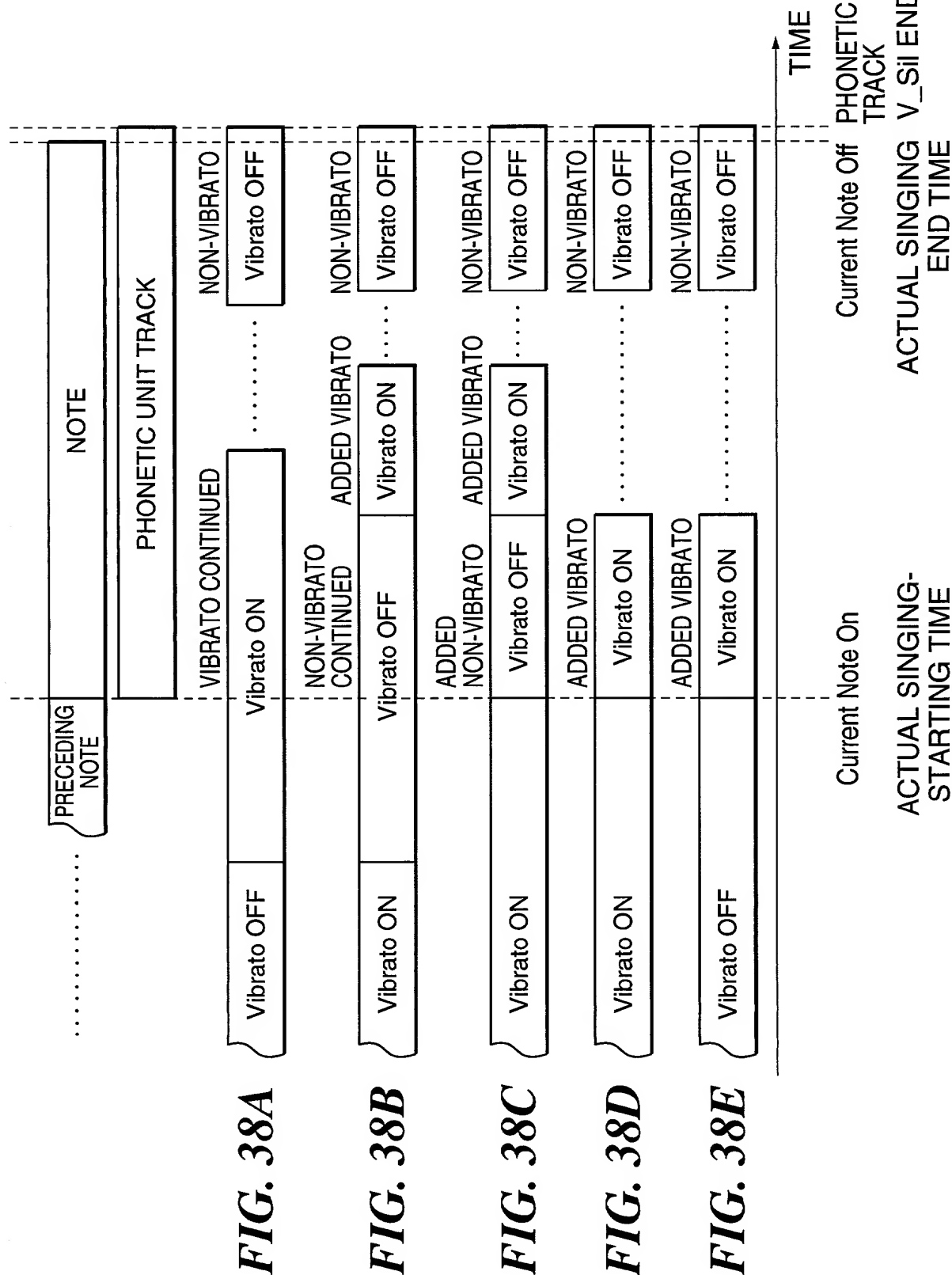
**FIG. 36C**



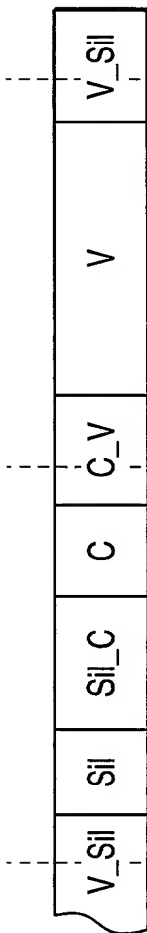
35/38

**FIG. 37**





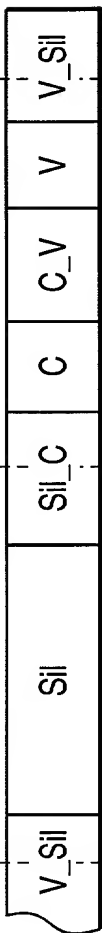
**FIG. 39A**  
 CONSONANT + VOWEL



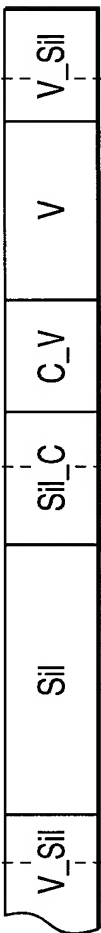
**FIG. 39B**  
 CONSONANT + VOWEL



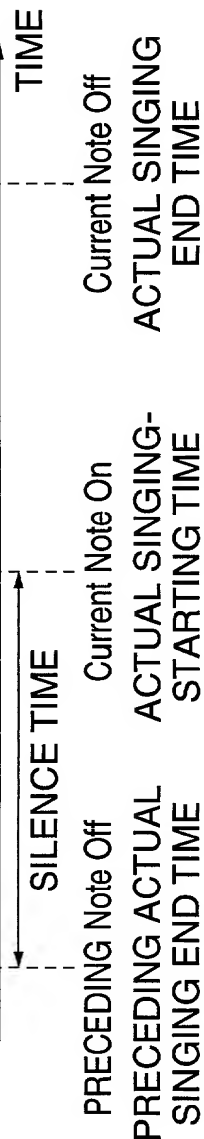
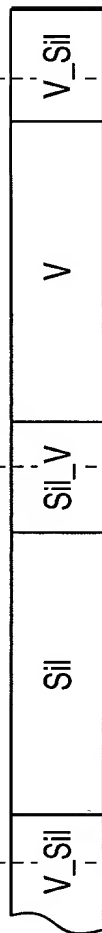
**FIG. 39C**  
 CONSONANT  
 (NASAL SOUND, HALF VOWEL) + VOWEL



**FIG. 39D**  
 CONSONANT  
 (NASAL SOUND, HALF VOWEL) + VOWEL

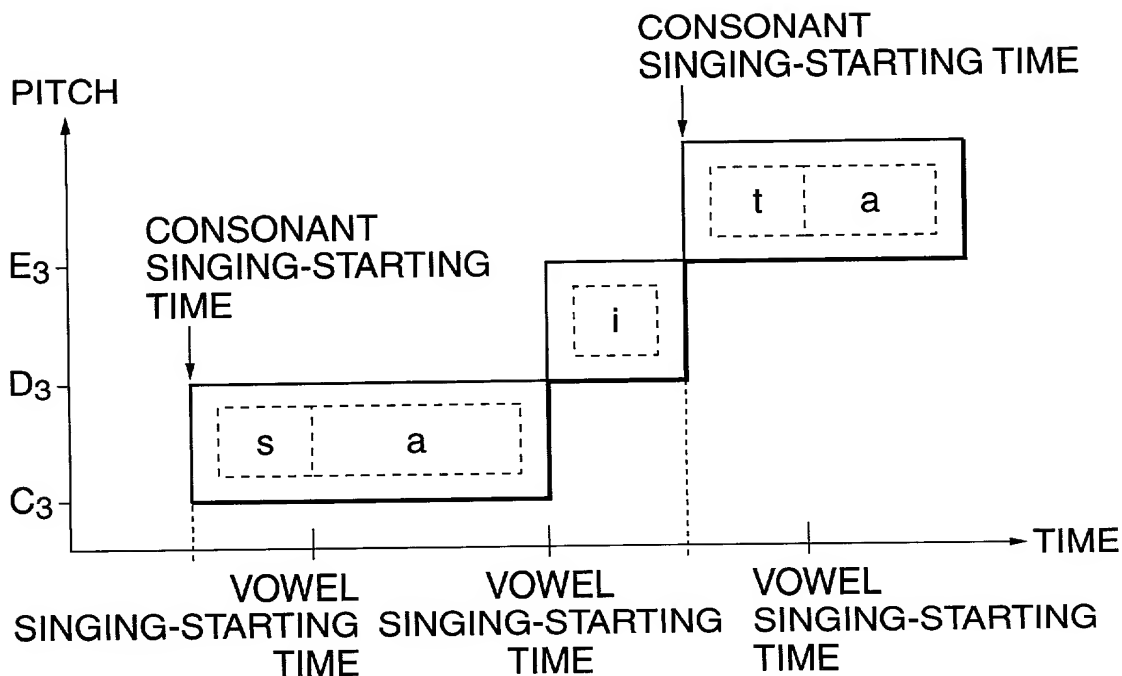


**FIG. 39E**  
 VOWEL ALONE  
 CONSONANT (NASAL SOUND) ALONE



38/38

**FIG. 40A**



**FIG. 40B**

